

TASK 6: SUBQUERIES AND NESTED QUERIES

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1.A SCALAR SUBQUERIES

```
mysql> select * from User u
-> where ( select avg(order_amount) From Orders)
-> <( select sum(order_amount) From Orders where user_id = u.user_id);
+-----+-----+-----+
| user_id | u_name | email      |
+-----+-----+-----+
| 1 | Aaliya | aaliya@gmail.com |
+-----+-----+-----+
1 row in set (0.02 sec)
```

```
mysql> select p.p_name,
-> (Select c_name From Product_Category where cat_id = p.cat_id) AS category_name
-> From Product p;
+-----+-----+
| p_name | category_name |
+-----+-----+
| SmartPhone | Electronics |
| T-Shirt | Clothing |
| Laptop | Electronics |
+-----+-----+
3 rows in set (0.00 sec)
```

1.B CORRELATED SUBQUERIES

```
mysql> select p.*
-> From Product p
-> where ( Select Count(Distinct order_no)
-> From Orders_Contains_Product ocp
-> Where ocp.prod_id = p.prod_id
-> ) > 2;
Empty set (0.00 sec)

mysql> select u.*
-> From User u
-> Where (
-> Select Count(*) From Orders o Where o.user_id = u.user_id
-> ) > 1;
Empty set (0.00 sec)
```

2. USE SUBQUERIES INSIDE EXIST,=,IN

```
mysql> select * From User
-> Where user_id IN (select Distinct user_id From Orders);
+-----+-----+-----+
| user_id | u_name | email      |
+-----+-----+-----+
```

user_id	u_name	email
1	Aaliya	aaliya@gmail.com
2	Rahul Sharma	rahul234@gmail.com

2 rows in set (0.00 sec)

```
mysql> select * From Orders
-> Where order_no IN (
-> Select order_no
-> From Orders_Contains_Product
-> Where prod_id = (Select prod_id From Product Where p_name = 'SmartPhone')
-> );
```

order_no	user_id	order_amount	order_date
101	1	20498.00	2025-06-22

1 row in set (0.01 sec)

```
mysql> select * From User u
-> Where Exists (
-> Select 1 From Orders o Where o.user_id = u.user_id
-> );
```

user_id	u_name	email
1	Aaliya	aaliya@gmail.com
2	Rahul Sharma	rahul234@gmail.com

2 rows in set (0.00 sec)

```
mysql> select * From Product_Category c
-> Where Exists (
-> Select 1 From Product p
-> Where p.cat_id = c.cat_id
-> AND p.prod_id IN (Select prod_id From Orders_Contains_Product)
-> );
```

cat_id	c_name
1	Electronics
2	Clothing

2 rows in set (0.00 sec)

```
mysql> select u_name
-> From User
-> Where user_id = (
-> Select user_id From Orders Where order_no = 101
-> );
```

```
+-----+
| u_name |
+-----+
| Aaliya |
+-----+
1 row in set (0.00 sec)
```

```
mysql> select price
-> From Product
-> where price = (
-> Select min(price) From Product
-> );
```

```
+-----+
| price |
+-----+
| 499.00 |
+-----+
1 row in set (0.00 sec)
```